

WE CLAIM:

1. In a fiber optic communication system having a plurality of network elements of a first type each having a plurality of transmitters, each of the transmitters having a minimum power level, a maximum power level and a current power level, a network element of a second type having a first database containing a respective plurality of values of power level adjustments and a second database, the network elements of the first type connected to the network element of the second type by optical fiber, the method comprising the steps of:

reading the plurality of values of power level adjustments from the first database;

querying the transmitters for their minimum power levels, maximum power levels and current power levels and writing the information to the second database;

calculating new values of transmitter power levels; and

setting the transmitter powers levels to the new power levels.

2. The method of claim 1 wherein the step of reading the plurality of values of power level adjustments from the first database further comprises writing the plurality of values of power level adjustments to the second database.

3. The method of claim 1 wherein the step of querying the transmitters further comprises checking for communications problems between the transmitters and the network element of the second type.

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4. In a fiber optic communication system having a plurality of network elements of a first type each having a plurality of transmitters, a network element of a second type having a database containing a respective plurality of values of current power levels, previous power levels and power level adjustments of the transmitters, a user interface and the network elements of the first type connected to the network element of the second type by optical fiber, the method comprising the steps of:

10 reading the values of current power levels, previous power levels and power level adjustments of the transmitters from the database; and

15 displaying the values of current power levels, previous power levels and power level adjustments of the transmitters on the user interface.

5. The method of claim 4 further comprising the step of checking for communication problems between the transmitters and the network element of the second type.

20 6. The method of claim 5 further comprising the steps of:

reading the plurality of values of power level adjustments from the first database;

25 querying the transmitters for their minimum power levels, maximum power levels and current power levels and writing the information to the second database;

calculating new values of transmitter power levels; and

setting the transmitter powers levels to the new power levels.

7. The method of claim 6 wherein the step of reading the plurality of values of power level adjustments from the first database further comprises writing the plurality of values of power level adjustments to the second database.

5 8. The method of claim 6 wherein the step of querying the transmitters further comprises checking for communications problems between the transmitters and the network element of the second type.

10 9. In a fiber optic communication system having a plurality of network elements of a first type each having a plurality of transmitters, each of the transmitters having a minimum power level, a maximum power level and a current power level, a network element of a second type having a first database containing a respective plurality of values of
15 power level adjustments, a second database and the network elements of the first type connected to the network element of the second type by optical fiber the method comprising the steps of:

20 reading the plurality of values of power level adjustments from the first database;

10 querying the transmitters for values of their minimum power levels, maximum power levels and current power levels;

25 writing the values of the minimum power levels, maximum power levels and current power levels of the transmitters to the second database;

calculating new values of the maximum power levels of the transmitters; and

setting the transmitter powers levels to the new maximum power levels.

10. The method of claim 9 wherein the step of reading the plurality of values of power level adjustments from the first database further comprises writing the plurality of values of power level adjustments to the second database.

11. The method of claim 9 wherein the step of querying the transmitters further comprises checking for communications problems between the transmitters and the network element of the second type.

12. A fiber optic communication system comprising:

a plurality of network elements of a first type each having a plurality of transmitters, each of the transmitters having a minimum power level, a maximum power level and a current power level;

a network element of a second type having a first database containing a respective plurality of values of power level adjustments and a second database, the network elements of the first type being connected to the network element of the second type by optical fiber;

means for reading the plurality of values of power level adjustments from the first database;

means for querying the transmitters for the values of their minimum power levels, a maximum power levels and a current power levels and writing the values of their minimum power levels, a maximum power levels and a current power levels to the second database;

means for calculating new values of transmitter power levels; and

means for setting the transmitter powers levels to the new power levels.

13. The fiber optic communication system of claim 12 wherein means for reading the plurality of values of power level adjustments from the first database further comprises writing the plurality of values of power level adjustments to the second database.

14. The fiber optic communication system of claim 12 wherein the means for querying the transmitters further comprises means for checking for communications problems between the transmitters and the network element of the second type.

15. A fiber optic communication system comprising:

a plurality of network elements of a first type each having a plurality of transmitters;

a network element of a second type having a database containing a respective plurality of values of current power levels, previous power levels and power level adjustments of the transmitters, the network elements of the first type being connected to the network element of the second type by optical fiber;

a user interface;

means for reading the values of current power levels, previous power levels and power level adjustments of the transmitters from the database; and

means for displaying the values of current power levels, previous power levels and power level adjustments of the transmitters on the user interface.

16. The fiber optic communication system of claim 15 further comprising means for checking for communication problems between the transmitters and the network element of the second type.

5 17. The fiber optic communication system of claim 16 further comprising:

means for reading the plurality of values of power level adjustments from the first database;

10 means for querying the transmitters for their minimum power levels, maximum power levels and current power levels and writing the information to the second database;

means calculating new values of transmitter power levels; and

15 means for setting the transmitter powers levels to the new power levels.

18. A fiber optic communication system comprising:

20 a plurality of network elements of a first type each having a plurality of transmitters, each of the transmitters having a minimum power level, a maximum power level and a current power level;

25 a network element of a second type having a first database containing a respective plurality of values of power level adjustments and a second database, the network elements of the first type being connected to the network element of the second type by optical fiber;

means for reading the plurality of values of power level adjustments from the first database;

means for querying the transmitters for the values of their minimum power levels, maximum power levels and current power levels;

means for writing the minimum power levels, maximum power levels and current power levels of the transmitters to the second database;

means for calculating new values of maximum transmitter power levels; and

means for setting the transmitter powers levels to the new maximum power levels.

19. The fiber optic communication system of claim 18 wherein the means for reading the plurality of values of power level adjustments from the first database further comprises means for writing the plurality of values of power level adjustments to the second database.

20. The fiber optic communication system of claim 18 wherein means for querying the transmitters further comprises means for checking for communications problems between the transmitters and the network element of the second type.

21. Computer-readable media embodying a program of instructions executable by a computer to perform a method of equalization of a fiber optic communication system having a plurality of network elements of a first type each having a plurality of transmitters, each of the transmitters having a minimum power level, a maximum power level and a current power level, a network element of a second type having a first database containing a respective plurality of values of power level adjustments and a second database, the network elements of the first type connected to the network element

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of the second type by optical fiber, the method comprising the steps of:

reading the plurality of values of power level adjustments from the first database;

5 querying the transmitters for their minimum power levels, maximum power levels and current power levels and writing the information to the second database;

calculating new values of transmitter power levels; and

10 setting the transmitter powers levels to the new power levels.

22. Computer-readable media embodying a program of instructions executable by a computer to perform a method of equalization of a fiber optic communication system having a plurality of network elements of a first type each having a plurality of transmitters, a network element of a second type having a database containing a respective plurality of values of current power levels, previous power levels and power level adjustments of the transmitters, a user interface and the network elements of the first type connected to the network element of the second type by optical fiber, the method comprising the steps of:

25 reading the values of current power levels, previous power levels and power level adjustments of the transmitters from the database; and

displaying the values of current power levels, previous power levels and power level adjustments of the transmitters on the user interface.

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23. Computer-readable media embodying a program of instructions executable by a computer to perform a method of equalization of a fiber optic communication system having a plurality of network elements of a first type each having a plurality of transmitters, each of the transmitters having a minimum power level, a maximum power level and a current power level, a network element of a second type having a first database containing a respective plurality of values of power level adjustments, a second database and the network elements of the first type connected to the network element of the second type by optical fiber the method comprising the steps of:

reading the plurality of values of power level adjustments from the first database;

querying the transmitters for values of their minimum power levels, maximum power levels and current power levels;

writing the values of the minimum power levels, maximum power levels and current power levels of the transmitters to the second database;

calculating new values of the maximum power levels of the transmitters; and

setting the transmitter powers levels to the new maximum power levels.